Indoor Plants - Soil Mixes

It is important to have the correct soil mix for healthy plant growth. A high-quality container mix has the following general requirements:

- Dense enough to support the plant.
- Good nutrient-holding capacity.
- Allows water and air to pass through readily, yet retains adequate moisture.
- Free of insects, diseases and weed seeds.

Most commercially prepared mixes are "soilless" or "artificial," which means they contain no soil. Most contain a combination of organic matter, such as peat moss or ground pine bark, and an inorganic material, such as washed sand, perlite or vermiculite. Vermiculite loses its structure in a relatively short time; hence, it is more suited for propagation media.

Many indoor gardeners use peat-lite mixtures, consisting of peat moss and either perlite or vermiculite. These soilless media are sterile, lightweight and easy to handle. High-quality mixes usually contain slow-release fertilizers that supply the plant's needs for a few months. These mixes are usually low, however, in trace or minor elements.

Commercially prepared mixes vary in price, ingredients, and physical and chemical characteristics. Evaluate several before deciding on which works best for you.

Garden soils contain too many bacteria and are generally not recommended for plants grown in containers. Unlike artificial mixes, which can be used right from the bag, native soil mixes must first be sterilized (pasteurized) to kill disease organisms, insects and weed seeds. Spread the soil on a cookie tray and bake until the coolest location heats up to 180 °F for 30 minutes. This process causes an unpleasant odor. Amend this soil with bark, peat, perlite or sand to improve the physical structure.

You can prepare your own artificial potting medium with little difficulty. The following mixes are suggested for growing foliage plants:

- Two parts peat, one part perlite, one part coarse sand.
- Two parts peat, one part coarse sand.
- One part peat, one part coarse sand, one part pine bark.
- One part peat, one part pine bark, one part perlite.

**Cornell Plant Mixes**

Two soilless mixes were developed at Cornell University for commercial growers, but they are easily adapted to home use. Each recipe will make a bushel.

**Cornell Foliage Plant Mix:**

- ½ bushel sphagnum peat moss
- ¼ bushel vermiculite, No. 2
- ¼ bushel perlite (medium fine)
- 8 tbsp. ground dolomitic lime
- 2 tbsp. superphosphate (20% powdered)
- 3 tbsp. 10-10-10 fertilizer
- 1 tbsp. iron sulfate
- 1 tbsp. potassium nitrate

This foliage plant mix is well-suited for ferns, *Begonia, Cissus, Coleus, Ficus, Maranta, Pelargonium, Pilea* and *Sansevieria*.

**Cornell Epiphytic Mix:**

- ⅓ bushel Douglas fir bark (finely ground)
- ⅓ bushel sphagnum peat moss (shredded)
- ⅓ bushel perlite (medium fine)
- 8 tbsp. ground dolomitic lime
6 tbsp. superphosphate (20% powdered)
3 tbsp. 10-10-10 fertilizer
1 tbsp. iron sulfate
1 tbsp. potassium nitrate

This plant mix is suitable for bromeliads, cacti, Crassula, Dieffenbachia, Episcia, Gloxinia, Hoya, Monstera, Philodendron and Peperomia.

Clemson Plant Mix
A growing medium used at Clemson is (by volumes):
- 2 parts pine bark (soil conditioning grade), 1 part peat, 1 part sand.

This mix should initially be adjusted to a pH of about 6.0 with dolomitic limestone. This growing medium has worked exceptionally well with all foliage plants, regardless of species. A supple-
mental application of a water-soluble fertilizer, such as a 20-20-20 with trace or minor elements, should be given every seventh watering.

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Prepared by Debbie Shaughnessy, HGIC Horticulture Specialist, and Al Pertuit, Extension Floriculture Specialist, Clemson University. (New 09/99.)

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